



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,844	06/14/2006	Shunsuke Kakisaka	50478-2300	8696

52044 7590 10/10/2007
SNELL & WILMER L.L.P. (Matsushita)
600 ANTON BOULEVARD
SUITE 1400
COSTA MESA, CA 92626

EXAMINER

PATEL, ASHOK

ART UNIT	PAPER NUMBER
----------	--------------

2879

MAIL DATE	DELIVERY MODE
-----------	---------------

10/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/582,844

Applicant(s)

KAKISAKA ET AL.

Examiner

Ashok Patel

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2 pages.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Art Unit: 2879

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu et al (2003/0141826, of record).

As to claim 1, Zhu et al disclose applicant's claimed metal halide lamp (at least Figures 1-2) including:

an arc tube (3) made of translucent ceramic and having a main tube part in which a pair of electrodes are disposed; and
an outer tube (1) housing the arc tube therein,
satisfying applicant's claimed range of $4.0 \leq L/D \leq 10.0$,
(see abstract) where L is a length of space between the electrodes and D is an internal diameter of the main tube part, and

Art Unit: 2879

satisfying applicant's claimed range of $M \leq 4.0$ (see col. 4, lines 46), where M (mg/cc) is a density of mercury enclosed in the arc tube,

As to claims 1 and 2, Zhu et al disclose the diameter of the arc tube being 4mm or 5mm (paragraphs 0030-0031). However, Zhu et al do not disclose applicant's claimed range of $R/r \geq 3.4$, where R is an internal diameter of the outer tube and r is an external diameter of the main tube part, within a region positionally corresponding to, in a radial direction of the outer tube and the arc tube, the space between the electrodes, on a cross-sectional surface where an outer circumference of the arc tube comes closest to an inner circumference of the outer tube. However, it has been held that where general conditions of the claim are discovered in the prior art, discovering the optimum or workable range involves only routine skill in the art. In re Aller, 105 USPQ 233.

As to claims 3 and 4, Zhu et al disclose the sodium halide and at least one of cerium halide and praseodymium halide (see at least Example 1).

As to claims 5 and 6, Zhu et al do not disclose a degree of vacuum inside the outer tube being no more than 1×10^3 Pa at 300K, as claimed by applicant. However, it has been held that where general


Art Unit: 2879

conditions of the claim are discovered in the prior art, discovering the optimum or workable range involves only routine skill in the art. In re Aller, 105 USPQ 233. Depending upon size and volume of the outer tube, applicant's claimed vacuum would have been obvious to one of ordinary skill in the art since pressure, volume, temperature, type of gas within the outer tube etc. are interdependent.

As to claim 8, Zhu et al disclose a luminaire including the metal halide lamp and a lighting circuit in Figure 11.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok Patel whose telephone number is 571-272-2456. The examiner can normally be reached on Monday-Thursday.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ashok Patel
Primary Examiner
Art Unit 2879